



A review of ecological factors associated with the epidemiology of wildlife trypanosomiasis in the Luangwa and Zambezi valley ecosystems of Zambia

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Abstract:

Trypanosomiasis has been endemic in wildlife in Zambia for more than a century. The disease has been associated with neurological disorders in humans. Current conservation strategies by the Zambian government of turning all game reserves into state-protected National Parks (NPs) and game management areas (GMAs) have led to the expansion of the wildlife and tsetse population in the Luangwa and Zambezi valley ecosystem. This ecological niche lies in the common tsetse fly belt that harbors the highest tsetse population density in Southern Africa. Ecological factors such as climate, vegetation and rainfall found in this niche allow for a favorable interplay between wild reservoir hosts and vector tsetse flies. These ecological factors that influence the survival of a wide range of wildlife species provide adequate habitat for tsetse flies thereby supporting the coexistence of disease reservoir hosts and vector tsetse flies leading to prolonged persistence of trypanosomiasis in the area. On the other hand, increase in anthropogenic activities poses a significant threat of reducing the tsetse and wildlife habitat in the area. Herein, we demonstrate that while conservation of wildlife and biodiversity is an important preservation strategy of natural resources, it could serve as a long-term reservoir of wildlife trypanosomiasis.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Meteorological Factors, Precipitation, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Valley

Geographic Location:

resource focuses on specific location

Non-United States

Climate Change and Human Health Literature Portal

Non-United States: Africa

African Region/Country: African Country

Other African Country: Zambia

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Fly-borne Disease

Fly-borne Disease: Trypanosomiasis

Resource Type: ☒

format or standard characteristic of resource

Review

Timescale: ☒

time period studied

Time Scale Unspecified